



April 24, 2007

H.R. 363 - Sowing the Seeds Through Science and Engineering Research Act

Floor Situation

H.R. 363 is being considered on the floor under a structured rule that provides for one hour of general debate equally divided and controlled by the Chairman and Ranking Member of the Committee on Science and Technology.

The Rule:

- Provides that the amendment in the nature of a substitute recommended by the Committee on Science and Technology shall be considered as an original bill for the purpose of amendment and shall be considered as read.
- Makes in order 3 additional amendments and waives all points of order against the bill except for clauses 9 (earmarks) and 10 (PAYGO) under Rule XXI. The first amendment (Hall R-TX) is debatable for 20 minutes and the remaining two amendments (Gillibrand D-NY and Tauscher D-CA) for 10 minutes each. (See amendments section at the end of document).
- Waives all points of order against consideration of the bill, the amendments that were made in order and the amendment in the nature of a substitute, except for clauses 9 (earmarks) and 10 (PAYGO) under of Rule XXI.

This legislation was introduced by Representative Bart Gordon (D-TN) on January 10, 2007 and was ordered reported from the Committee on Science, by voice vote, on February 28, 2007.

H.R. 363 is expected to be considered on the floor on April 24, 2007.

**Note: During the 109th Congress, portions of this legislation were included in H.R. 5356, the Research for Competitiveness Act introduced by Rep. Michael McCaul (R-TX). The legislation was reported from the Committee on Science but never considered in the full House.*

Summary

H.R. 363 seeks to encourage research and development in a variety of fields. The

legislation allows the National Science Foundation and Department of Energy to issue a series of monetary awards to those engaged in research in their perspective fields.

In order for a recipient to be eligible for an award they must meet the following criteria:

- In a tenure-track position as an assistant professor or equivalent title, or hold an equivalent position, at an institution of higher education in the United States or an organization in the United States that is a nonprofit, nondegree-granting research organization such as a museum, observatory, or research laboratory

If the candidate for the award meets the above criteria, the Director of the National Science Foundation will evaluate the request based on:

- the intellectual merit of the proposed work;
- the innovative or transformative nature of the proposed research;
- the extent to which the proposal integrates research and education, including undergraduate education in science and engineering disciplines; and
- the potential of the applicant for leadership at the frontiers of knowledge

The rewards will last for 5 years and will be no less than \$80,000 for each year. The sum may be higher depending on the research being conducted.

The Department of Energy will also develop a program similar to the National Science Foundation. The criterion is the same as above. The Department of Energy will give priority to proposals in which the proposed work includes collaboration with the Department of Energy National Laboratories. The Secretary of Energy will be authorized, based on appropriations, \$25 million dollars to carry out the program.

Within 2 years of the enactment of the bill, a report must be delivered to the House Committee on Science and Technology and the Senate Committee on Commerce, Science, and Transportation on the impact of the overall reward program focusing on the ability of young faculty to compete for National Science Foundation research grants.

This legislation also creates the Presidential Innovation Award and creates a “National Coordination Office for Research Infrastructure” within the Office of Science and Technology.

The Presidential Innovation Award will be given to individuals chosen by the Director of the Office of Science and Technology Policy who have developed unique scientific or engineering ideas in the national interest. These individuals must be United States citizens or in the process of becoming citizens. The purpose of the award is to give an example to students as to how science and engineering can be used to help further national interests. It is hoped that by giving young people more role models in the fields of science and engineering that they will want to enter those fields, thus increasing America’s presence in the perspective fields.

The National Coordination Office for Research Infrastructure will identify and prioritize the deficiencies in research facilities and equipment located at academic institutions and at national laboratories that are available for use by academic researchers and institute and coordinate the planning and acquisition, refurbishment, and maintenance of research facilities and major instrumentation required to address the deficiencies that are discovered.

The office will report back to Congress annually on the progress being made in acquiring equipment and updating facilities.

The legislation also expresses a sense of congress that NASA should be funded at the levels requested in the President's budget and that NASA contributes to the development of young scientists and engineers.

Background

A number of recent reports from various agencies including the National Defense Education and Innovation Initiative, the Council on Competitiveness and The National Academy of Sciences (NAS) report, "Rising Above the Gathering Storm" have all come to the conclusion that there is a general lack of research in science and engineering in America. China and India are making strides and pouring resources into this area and some believe that America needs to improve their research as well.

Younger students often have trouble getting funding to start their own laboratories and research projects. Yet younger scientists are also more likely to do innovative or transformative work. This legislation would offer rewards for younger students and facility above and beyond grants that are already available to encourage them to continue their work in the fields of science and engineering.

This Act focuses on some of the recommendations made in these reports that relate to science and technology research funding. It strengthens federal support for science and engineering researchers at the early stages of their careers, expands the Integrative Graduate Education and Research Traineeship program at NSF, establishes a Presidential Innovation Award, establishes a coordination office for research infrastructure, and authorizes NSF to support research on innovation.

Amendments

Hall (R-TX) This amendment requires the Director of the National Science Foundation to allocate at least 3.5% of funds appropriated to the National Science Foundation for Research and Related Activities to the early career awards for science and engineering researchers except to the extent that a sufficient number of meritorious grant applications have not been received for a fiscal year.

Gillibrand (D-NY) The National Science Foundation shall institute a program to award scholarships in science, technology, engineering, or mathematics to undergraduate

scholars. Scholarships awarded shall provide for a student's full tuition during their last two years at an undergraduate institution.

Tauscher (D-CA) (REVISED) Under the NSF awards guidelines, the amendment recommends that the Director "shall give special consideration to eligible early-career researchers who have followed alternative career paths such as working part-time or in non-academic settings, or who have taken a significant career break or other leave of absence". The amendment would also add to the Presidential Award section that an additional purpose of the award is that it helps foster innovation that enhances American competitiveness.

Cost

The Congressional Budget Office (CBO) has estimated that H.R. 363 would cost \$921 million over the 2008-2012 period, assuming the appropriation of the necessary funds.

Staff Contact

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